

**WASHINGTON STATE DEPARTMENT OF HEALTH
OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS**

ANNUAL GROWING AREA REVIEW

PREPARED BY: Donald Melvin, Environmental Specialist

AREA: Birch Bay

YEAR ENDING: December 31, 2005

CLASSIFICATION: Approved, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2005:

Samples were collected from each station in the growing area 6 times during the year using the systematic random sampling method.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 summarizes the results of all samples collected from the area. This summary shows that all stations in the approved portion of the growing area pass the NSSP water quality standard. Table #1 also shows that station number 22 is threatened and station number 28 is of concern due to elevated bacteria levels. Individual sampling results for station #22 are shown in Table #2.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

We currently have no information indicating that the area has new sources of pollution.

CLASSIFICATION STATUS:

- ☐ Well within the classification standards
- ☐ Meets standards but some concerns
- ☒ Meets standards but threatened with a downgrade in classification
- ☐ Fails to meet classification standards

REMARKS AND RECOMMENDATIONS:

The shoreline near stations 22 and 28 should be surveyed for pollution sources.

TABLE 1

SUMMARY OF MARINE WATER DATA (SRS)

Growing Area: **BIRCH BAY**

Classification: **Approved, Prohibited, Unclassified**

From **11/29/2000** To **11/03/2005**

FECAL COLIFORM ORGANISMS/100 ML

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
21	Approved	31	1.7 - 170.0	4.1	19.0	Yes
22	Approved	31	1.7 - 140.0	5.1	32.0	Yes
24	Approved	31	1.7 - 79.0	3.9	17.0	Yes
26	Approved	31	1.7 - 17.0	2.4	6.0	Yes
28	Approved	30	1.7 - 110.0	4.8	23.0	Yes
17	Prohibited	31	1.7 - 920.0	4.8	46.0	No
18	Unclassified	31	1.7 - 130.0	3.4	13.0	Yes
19	Unclassified	11	1.7 - 33.0	3.1	11.0	*N/A
20	Unclassified	31	1.7 - 220.0	3.5	19.0	Yes
29	Unclassified	30	1.7 - 7.8	2.1	4.0	Yes
30	Unclassified	31	1.7 - 130.0	3.1	15.0	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

* N/A - SRS criteria require a minimum of 30 samples from each station. *

TABLE 2

**SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS**

Growing Area: **BIRCH BAY**

Sampling Station Number: **22**

Classification: **Approved**

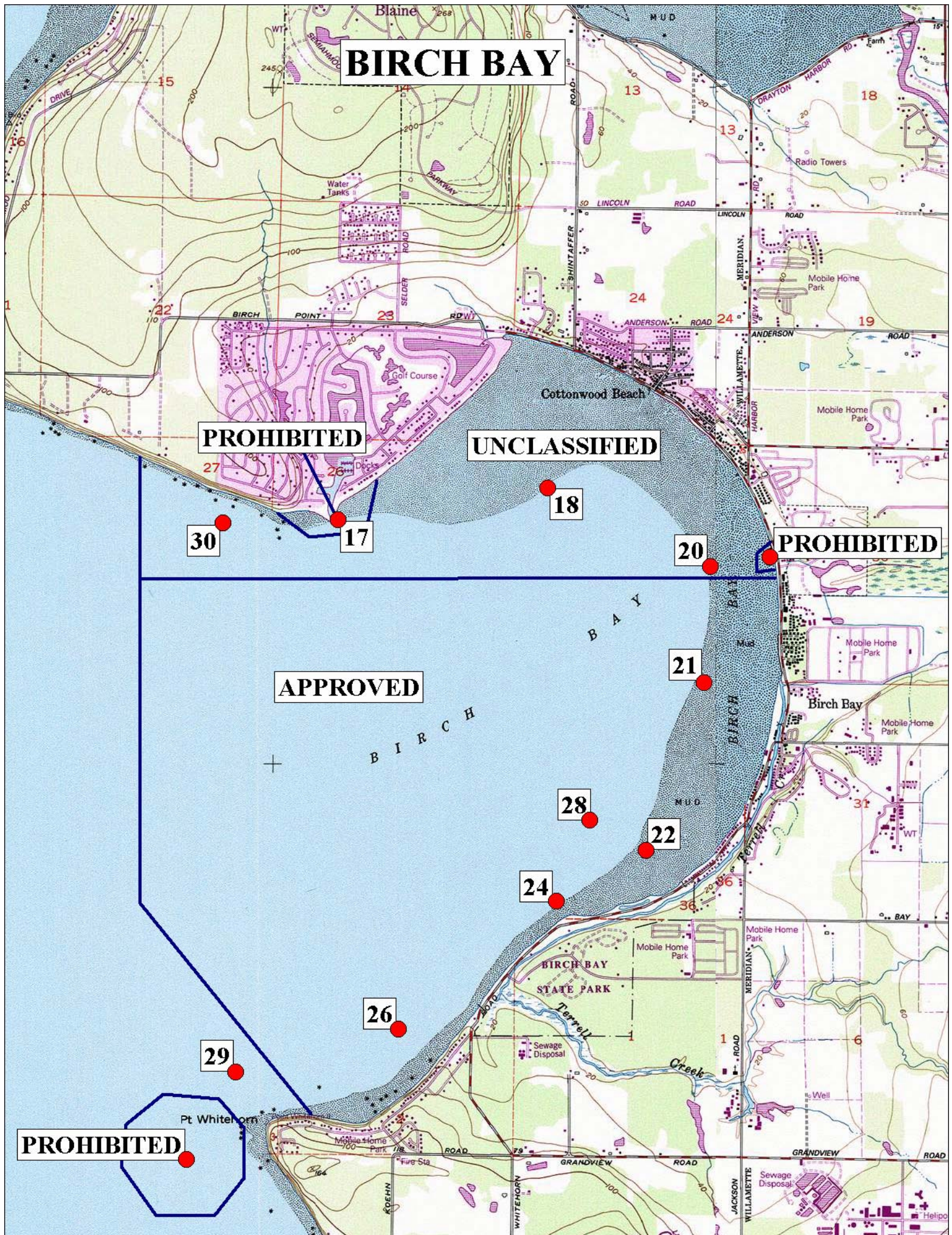
Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
11/29/2000	09:28	Ebb	13	8	28
01/24/2001	10:03	Ebb	70	7	28
03/08/2001	10:48	Ebb	7.8	7	30
05/17/2001	12:28	Flood	1.7	11	30
07/11/2001	10:10	Ebb	1.7	17	25
09/26/2001	10:26	Flood	1.7	13	30
11/08/2001	09:28	Flood	33	10	30
01/09/2002	10:27	Flood	31	8	30
03/27/2002	10:38	Ebb	1.7	7	30
05/22/2002	09:58	Ebb	1.7	11	25
07/31/2002	09:42	Flood	1.7	15	28
09/18/2002	09:34	Ebb	1.7	13	30
11/14/2002	09:57	Flood	4.5	9	30
01/08/2003	10:08	Flood	22	7	30
06/11/2003	09:42	Ebb	2	15	22
07/10/2003	13:12	Flood	1.7	16	25
09/04/2003	12:58	Flood	1.7	13	30
11/20/2003	10:02	Flood	49	5	18
11/20/2003	15:43	Ebb	23	7	20
01/22/2004	11:50	Ebb	49	7	28
04/14/2004	10:19	Ebb	1.7	9	30
06/09/2004	08:48	Flood	1.7	12	30
08/25/2004	09:49	Flood	1.7	15	25
10/27/2004	09:45	Ebb	11	9	30
11/03/2004	09:33	Flood	140	8	28
01/06/2005	09:47	Flood	1.7	5	25
03/23/2005	11:37	Flood	1.7	7	30
05/04/2005	09:39	Ebb	1.7	12	30
07/13/2005	13:09	Ebb	1.7	16	20
09/28/2005	10:52	Flood	1.7	12	30
11/03/2005	11:39	Ebb	11	9	30

Number of Samples: 31

Geometric Mean: 5.1

Range: 1.7 - 140

Estimated 90th Percentile: 32



Most recent five-year trend in fecal coliform pollution.

